



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0329; Directorate Identifier 2012-NM-032-AD]

RIN 2120-AA64

Airworthiness Directives; Airbus Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede two existing airworthiness directives (ADs) that apply to certain Airbus Model A330-200, A330-200 Freighter, A300-300, A340-200, A340-300, A340-500, and A340-600 series airplanes. One existing AD currently requires revising the airplane flight manual (AFM) to include appropriate operational procedures to prevent the air data inertial reference unit (ADIRU) from providing erroneous data to other airplane systems. The other existing AD currently requires revising the AFM to provide appropriate operational procedures to prevent the airplane flight directors (FDs), autopilot (AP), and auto-thrust re-engagement in the event of airspeed sources providing similar but erroneous data. Since we issued that AD, we have determined that new software standards for the flight control primary computers (FCPCs) are necessary to inhibit autopilot re-engagement under unreliable airspeed conditions. This proposed AD would require that operators modify or replace all three FCPCs with new software standards. This proposed AD would also remove certain airplanes from the applicability. We are proposing this AD to prevent autopilot engagement under unreliable airspeed conditions, which could result in reduced controllability of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Airbus SAS – Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email airworthiness.A330-A340@airbus.com; Internet <http://www.airbus.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through

Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone 425-227-1138; fax 425-227-1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2013-0329; Directorate Identifier 2012-NM-032-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

On January 23, 2009, we issued AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009). On January 12, 2011, we issued AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011). Those ADs required actions intended to address an unsafe condition on the products listed above.

Since we issued those ADs, we have determined that new software standards for the FCPCs are necessary to inhibit autopilot re-engagement under unreliable airspeed conditions. The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2011-0199R1, dated February 17, 2012 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

It has been determined that, when there are significant differences between all airspeed sources, the flight controls of an Airbus A330 or A340 aeroplane will revert to alternate law, the autopilot (AP) and the auto-thrust (A/THR) automatically disconnect, and the Flight Directors (FD) bars are automatically removed.

Further analyses have shown that, after such an event, if two airspeed sources become similar while still erroneous, the flight guidance computers will display the FD bars again, and enable the re-engagement of AP and A/THR. However, in some cases, the AP orders may be inappropriate, such as possible abrupt pitch command.

In order to prevent such events which may, under specified circumstances, constitute an unsafe condition, EASA issued AD 2010-0271 [which corresponds to FAA AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011)] to require an amendment of the Flight Manual to ensure that flight crews apply the appropriate operational procedure.

Since that [EASA] AD was issued, new FCPC software standards have been developed that will inhibit autopilot engagement under unreliable airspeed conditions.

Consequently, EASA issued AD 2011-0199 to require software standard upgrade of the three FCPCs by either modification or replacement, as follows:

- software standard P11A/M20A on FCPC 2K2 hardware for A330-200/-300 aeroplanes [with electrical rudder], through Airbus Service Bulletin (SB) A330-27-3176,
- software standard P12A/M21A on FCPC 2K1 hardware and M21A on FCPC 2K0 hardware for A330-200/-300 aeroplanes [with mechanical rudder], through Airbus SB A330-27-3177,
- software standard L22A on FCPC 2K1 hardware and L22A on FCPC 2K0 hardware for A340-200/-300 aeroplanes [with mechanical rudder], through Airbus SB A340-27-4174, and
- software standard L21A on FCPC 2K2 hardware for A340-300 aeroplanes [with electrical rudder], through Airbus SB A340-27-4162.

* * * * *

You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

Airbus has issued the following service bulletins:

- Mandatory Service Bulletin A330-27-3176, Revision 02, dated April 24, 2012
- Mandatory Service Bulletin A330-27-3177, dated December 21, 2011
- Mandatory Service Bulletin A340-27-4162, Revision 01, dated September 17,

2012

- Mandatory Service Bulletin A340-27-4174, dated November 21, 2011

The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Costs of Compliance

Based on the service information, we estimate that this proposed AD would affect about 59 products of U.S. registry.

The actions that are required by AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009), and retained in this proposed AD take about 1 work-hour per product, at an average labor rate of \$85 per work hour. Required parts cost about \$0 per product. Based on these figures, the estimated cost of the actions currently required by AD 2009-04-07 is \$85 per product.

The actions that are required by AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011), and retained in this proposed AD take about 1 work-hour per product, at an average labor rate of \$85 per work hour. Required parts cost about \$0 per product. Based on these figures, the estimated cost of the actions currently required by AD 2011-02-09 is \$85 per product.

We estimate that it would take about 5 work-hours per product to comply with the new basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$0 per product. Where the service information lists required parts costs that are covered under warranty, we have assumed that there will be no charge for these parts. As we do not control warranty coverage for affected parties, some parties may incur costs higher than estimated here. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$25,075, or \$425 per product.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct

effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009), and AD

2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011), and adding the following new AD:

Airbus: Docket No. FAA-2013-0329; Directorate Identifier 2012-NM-032-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009; and AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011).

(c) Applicability

This AD applies to the Airbus airplanes, certificated in any category, as identified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Model A330-223F, -243F, -201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes; except those on which Airbus modification 201654 has been embodied in production, or Airbus Service Bulletin A330-27-3156 has been incorporated in service.

(2) All Model A340-211, -212, -213, -311, -312, and -313 airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight controls.

(e) Reason

This AD was prompted by the possibility that, due to significant differences among all airspeed sources, the flight controls will revert to alternate law, the autopilot

(AP) and the auto-thrust (A/THR) automatically disconnect, and the flight director (FD) bars are automatically removed. Then, if two airspeed sources become similar while still erroneous, the flight guidance computers will display the FD bars again, and enable the re-engagement of AP and A/THR. In some cases, however, the AP orders may be inappropriate, such as possible abrupt pitch command. We are issuing this AD to prevent autopilot engagement under unreliable airspeed conditions, which could result in reduced controllability of the airplane.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Retained Airplane Flight Manual (AFM) Revision: Certain NAV faults or ATT flag on PFD

This paragraph restates the actions required by paragraph (f) of AD 2009-04-07, Amendment 39-15813 (74 FR 7549, February 18, 2009). For all airplanes except Model A330-223F and -243F airplanes: Within 14 days after March 5, 2009 (the effective date of AD 2009-04-07), revise the applicable section of the A330 or A340 (Airbus) Flight Manual (FM) by inserting a copy of A330 (Airbus) Temporary Revision (TR) 4.02.00/46, or A340 (Airbus) TR 4.02.00/54, both Issue 3, both dated January 13, 2009, as applicable. Thereafter, operate the airplane according to the limitations and procedures in the TRs. When information identical to that in the TR has been included in the general revisions of the FM, the general revisions may be inserted in the FM, and the TR may be removed.

(h) Retained AFM Revision: Alternate Law Associated with AP and A/THR Disconnection

This paragraph restates the actions required by paragraph (g) of AD 2011-02-09, Amendment 39-16583 (76 FR 4219, January 25, 2011). Within 15 days after February 9, 2011 (the effective date of AD 2011-02-09), do the actions in paragraph (h)(1) or (h)(2) of this AD.

(1) Revise the Limitations and Abnormal Sections of the Airbus A330/A340 AFM to include the following statement and operate the airplane according to these limitations and procedures. This may be done by inserting a copy of this AD in the AFM. When a statement identical to that in paragraph (h)(1) of this AD has been included in the general revisions of the Limitations and Abnormal Sections of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

PROCEDURE:

When autopilot and auto-thrust are automatically disconnected and flight controls have reverted to alternate law:

- Do not engage the AP and the A/THR, even if FD bars have reappeared

- Do not follow the FD orders

- ALL SPEED INDICATIONS X-CHECK

- If unreliable speed indication is suspected:

- UNRELIABLE SPEED INDIC/ADR CHECK PROC APPLY

- If at least two ADRs provide reliable speed indication for at least 30 seconds, and the aircraft is stabilised on the intended path:

AP/FD and A/THR. As required

(2) Revise the Limitations and Abnormal Sections of the Airbus A330/A340 AFM to include the information in Airbus A330/A340 Temporary Revision (TR) TR149 (for Model A330 airplanes) or TR150 (for Model A340-200 and -300 series airplanes), both Issue 1.0, both dated December 20, 2010. These TRs introduce procedures for operation of the auto pilot and auto-thrust disconnect. Operate the airplane according to the limitations and procedures in the TRs. This may be done by inserting copies of Airbus A330/A340 TR TR149 or TR150, both Issue 1.0, both dated December 20, 2010; as applicable; into the Airbus A330/A340 AFM. When these TRs have been included in general revisions of the AFM, the general revisions may be inserted in the AFM, and the TRs may be removed.

(i) New Software Standard Upgrade

Within 10 months after the effective date of this AD, upgrade (by modification or replacement, as applicable) the three flight control primary computers (FCPCs), as specified in paragraphs (i)(1), (i)(2), (i)(3), and (i)(4) of this AD, as applicable. Accomplishment of the applicable requirements of this paragraph terminates the requirements of paragraphs (g) and (h) of this AD.

(1) For Model A330 series airplanes: Upgrade to software standard P11A/M20A on FCPC 2K2 hardware, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3176, Revision 02, dated April 24, 2012.

(2) For Model A330 series airplanes: Upgrade to software standard P12A/M21A on FCPC 2K1 hardware, and software standard M21A on FCPC 2K0 hardware, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A330-27-3177, dated December 21, 2011.

(3) For Model A340 series airplanes: Upgrade to software standard L22A on FCPC 2K1 hardware, and software standard L22A on FCPC 2K0 hardware, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A340-27-4174, dated November 21, 2011.

(4) For Model A340 series airplanes: Upgrade to software standard L21A on FCPC 2K2 hardware, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A340-27-4162, Revision 01, dated September 17, 2012.

(j) Credit for Previous Actions

(1) This paragraph provides credit for the actions specified in paragraph (i)(1) of this AD, if those actions were performed before the effective date of this AD using Airbus Mandatory Service Bulletin A330-27-3176, dated July 26, 2011; or Airbus Mandatory Service Bulletin A330-27-3176, Revision 01, dated March 27, 2012; which are not incorporated by reference.

(2) This paragraph provides credit for the actions specified in paragraph (i)(4) of this AD, if those actions were performed before the effective date of this AD using Airbus Mandatory Service Bulletin A340-27-4162, dated January 10, 2012, which is not incorporated by reference.

(k) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local

Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone 425-227-1138; fax 425-227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(l) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2011-0199R1, dated February 17, 2012, and the service information identified in paragraphs (i)(1)(i) through (i)(1)(viii) of this AD.

(i) Airbus Mandatory Service Bulletin A330-27-3176, Revision 02, dated April 24, 2012.

(ii) Airbus Mandatory Service Bulletin A330-27-3177, dated December 21, 2011.

(iii) Airbus Mandatory Service Bulletin A340-27-4162, Revision 01, dated September 17, 2012.

(iv) Airbus Mandatory Service Bulletin A340-27-4174, dated November 21, 2011.

(v) Airbus A330 Temporary Revision 4.02.00/46, Issue 3, dated January 13, 2009, to the Airbus A330 Airplane Flight Manual.

(vi) Airbus A340 Temporary Revision 4.02.00/54, Issue 3, dated January 13, 2009, to the Airbus A340 Airplane Flight Manual.

(vii) Airbus A330/A340 Temporary Revision TR149, Issue 1.0, dated December 20, 2010, to the Airbus A330/A340 Airplane Flight Manual.

(viii) Airbus A330/A340 Temporary Revision TR150, Issue 1.0, dated December 20, 2010, to the Airbus A330/A340 Airplane Flight Manual.

(2) For service information identified in this AD, contact Airbus SAS – Airworthiness Office – EAL, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 45 80; email airworthiness.A330-A340@airbus.com; Internet <http://www.airbus.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on April 4, 2013.

Ali Bahrami,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2013-08909 Filed 04/15/2013 at 8:45 am; Publication Date: 04/16/2013]